

What is claimed is:

1. A method, comprising:
  - storing, in response to a calibration initiation, at least one operational parameter of an input channel in communication with a probe;
  - determining if a calibration signal communicated by said probe exhibits a characteristic indicative of inappropriate probe operation;
  - adapting at least one calibration parameter in response to a determination of inappropriate probe operation; and
- 10 retrieving said at least one operational parameter of said input channel.
2. The method of claim 1, wherein said calibration initiation comprises at least one of a detection of a said calibration signal and an indicium of a user request to calibrate.
- 15 3. The method of claim 1, wherein:
  - said step of retrieving said at least one operational parameter of said input channel is performed after a determination that said exhibited characteristic indicative of inappropriate probe operation has been reduced to a threshold level.
- 20 4. The method of claim 3, further comprising displaying a user message indicative of a completed calibration.
- 25 5. The method of claim 1, wherein said calibration parameter comprises a probe compensation parameter.
6. The method of claim 1, further comprising:
  - detecting an attenuation factor associated with said probe.
- 30 7. The method of claim 1, wherein said calibration parameter comprises at least one operational parameter of said input channel, said adapted at least one

operational parameter tending to offset said characteristic indicative of inappropriate probe operation.

8. The method of claim 1 wherein said calibration signal communicated by  
5 said probe is displayed on a display device, said inappropriate probe operation  
being determined using said displayed calibration signal.

9. The method of claim 8 wherein a display region associated with said  
display device delineates a display envelope within which a calibration signal  
10 provided by a correctly calibrated probe is displayed.

10. The method of claim 9 further comprising:  
modifying an initial calibration signal communicated to said probe; and  
modifying said display region associated with said display device in a  
15 manner consistent with said initial calibration signal modifications.

11. The method of claim 1 wherein said step of determining comprises  
comparing said calibration signal communicated by said probe to a reference  
calibration signal, said characteristic indicative of inappropriate probe operation  
20 comprising an unfavorable comparison.

12. The method of claim 1, further comprising:  
verifying that said calibration signal communicated by said probe is a  
valid calibration signal, said step of adapting being avoided in the case of  
25 unfavorable verification of said calibration signal.

13. The method of claim 12, wherein said verification comprises:  
modifying at least one of a frequency parameter, a duty cycle parameter  
and an amplitude parameter of an initial calibration signal; and  
30 verifying that said calibration signal communicated by said probe  
includes characteristics indicative of the modification imparted to said initial  
calibration signal.

14. The method of claim 1, further comprising:  
displaying at least one of an over-shoot or under-shoot value associated  
with said calibration signal communicated by said probe, said over-shoot and  
under-shoot values approaching a predefined value as a compensation of said  
probe is properly adjusted.

15. The method of claim 1, wherein said probe communicates with any one  
of a plurality of input channels, said method further comprising:  
identifying whether a calibration signal received via any of said plurality  
10 of input channels at least partially conforms to an initial calibration signal; and  
for each input channel having associated with it at least a partially  
conforming signal, performing the steps of storing, determining, adapting and  
retrieving.

15 16. The method of claim 1, wherein in the case of said calibration signal  
being communicated by each of a plurality of probes, each of said plurality of  
probes communicating via a respective input channel; said method is modified  
as follows:  
said step of storing comprises storing at least one operational parameter  
20 of each of said plurality of input channels;  
said step of determining comprises determining whether said calibration  
signals communicated by said respective probes exhibit inappropriate temporal  
synchronization;  
said step of adapting comprises adapting a temporal offset parameter of  
25 at least one input channel in response to a determination of inappropriate  
temporal synchronization; and  
said step of retrieving comprises retrieving said stored at least one  
operational parameter of each of said plurality of input channels.

30 17. The method of claim 16, wherein said calibration initiation comprises at  
least one of a detection of a said calibration signal via each of said plurality of  
input channels and an indicium of a user request to perform a deskew  
operation.

18. The method of claim 1, further comprising:  
determining whether an error condition exists, said error condition  
comprising at least one of a return terminal of a probe being incorrectly  
grounded, an amplitude of an input signal being incorrect, and signal noise  
5 above a threshold level being present.

19. A method, comprising:  
storing, in response to a calibration initiation, at least one operational  
parameter of each of a plurality of input channels in communication with  
10 respective probes, each of said input channels providing a respective output  
signal for subsequent use by a processor;  
determining if said output signals provided by said input channels exhibit  
a characteristic indicative of inappropriate temporal synchronization;  
adapting a temporal calibration parameter of at least one of said input  
15 channels in response to a determination of inappropriate temporal  
synchronization; and  
retrieving said at least one operational parameter of each of a plurality of  
input channels.

20. 20. A method, comprising:  
determining, in response to the application of a calibration signal to a  
probe, whether a corresponding calibration signal communicated by said probe  
to a measuring device exhibits a characteristic indicative of inappropriate probe  
operation; and  
25 adapting at least one calibration parameter in response to a  
determination of inappropriate probe operation.

21. A method, comprising:  
receiving a calibration signal via a probe;  
30 setting an attenuation factor of said probe;  
displaying, on a display device, imagery delineating a region associated  
with a properly calibrated signal; and

selectively indicating whether said received calibration signal comprises a properly calibrated signal.

22. A method for use in a signal analysis device, said signal analysis device comprising a plurality of input channels and a processor, each of said input channels capable of receiving an input signal from a respective probe and producing therefrom a respective output signal, said processor adapted to process data representative of at least one of said output signals, said method comprising:

5           storing, in response to a calibration initiation, at least one operational parameter of an input channel in communication with a probe;

10           determining if a calibration signal communicated by said probe exhibits a characteristic indicative of inappropriate probe operation;

15           adapting at least one calibration parameter in response to a determination of inappropriate probe operation; and

20           retrieving said at least one operational parameter of said input channel.

23. The method of claim 22, wherein said step of retrieving is performed in response to an indicium of a user request to terminate calibration.

24. The method of claim 23, wherein said user indicium comprises at least one of a cancel command and a determination that said calibration signal communicated by said probe is not a valid calibration signal.

25. A signal analysis device, comprising:

25           a plurality of input channels, each of said input channels capable of receiving an input signal from a respective probe and producing therefrom a respective output signal;

30           a processor, adapted to process data representative of at least one of said output signals; and

35           a calibration signal generator, for generating a calibration signal for communication to at least one of said input channels via a respective probe;

said processor, in a calibration mode, storing operational parameters of an input channel having associated with it a probe to be calibrated, enabling the calibration of said probe to be calibrated, and restoring to said input channel the stored operational parameters.

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26. The signal analysis device of claim 25, wherein said signal analysis device comprises an oscilloscope.

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